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ARCHAEOLOGICAL RECONNAISSANCES IN SOUTHERN PERSIA

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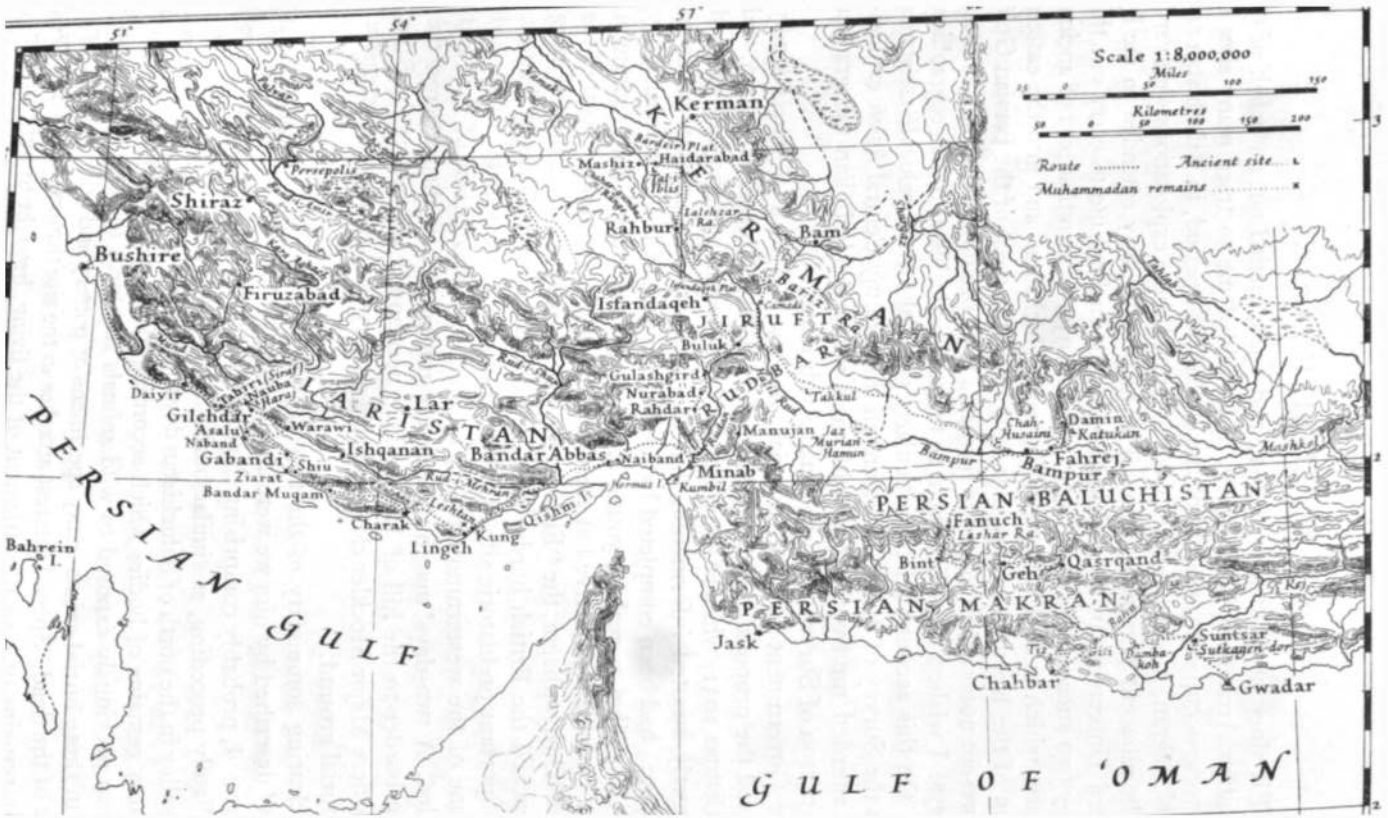
EVER since my journeys of 1927 and 1928, carried out on behalf of the Indian Archaeological Survey, had enabled me to trace many sites of prehistoric occupation, mainly of the chalcolithic period, in Baluchistan and British Makran, it had been my wish to extend these explorations westwards into the adjacent regions of Iran. The help generously extended to me by Harvard University and the British Museum enabled me to carry out this plan by two successive expeditions made in 1932–33 into that part of ancient Gedrosia which is now known as Persian Baluchistan, and into the eastern portion of the Kerman province and all along the coast of the Persian Gulf. The present notes are intended to furnish a brief preliminary account of these journeys. I wished to utilize them as far as practicable also for geographical work. On this account I felt particularly grateful for the valuable assistance which the Survey of India, as before all through my Central Asian explorations, afforded me by deputing with me a very capable Indian topographer in the person of Surveyor Muhammad Ayub Khan.

The Government of His Imperial Majesty the Shah of Persia kindly approved the proposal submitted through H.B.M.'s Minister at Tehran, and at Christmas 1931, while at work between the Jhelum and Indus, I received the eagerly awaited information that the necessary arrangements about an escort, etc., had been completed by the Persian authorities. Accompanied by Dr. C. L. Fábri, a zealous young archaeologist from the Kern Institute of Leiden University, I arrived at the little port of Gwadar, on the coast of the ancient Ikhthyophagoi, the "Fish-eaters," by January 4, and on the following day reached the British border post of the Makran Levy Corps at Suntsar. The important prehistoric site of Sutkagen-dor in its immediate vicinity had been one of the westernmost points to which my explorations of 1928 had extended. A two-days' march over desert ground took us thence across the Persian border to the hill of Damba-koh, near an old dry bed of the Bahu river, where Major Mockler close on half a century ago had noted an extensive early burial ground.

By clearing some sixty of the two thousand odd cairns or little "stone-houses" described by him we were able to ascertain that they belonged to the same period, probably comprising the first few centuries of our era and those immediately preceding, as similar burial sites traced by me before from the Zhob valley in the north of Baluchistan down to the Makran coast. Apart from the scanty remains of bodies which according to the ancient Iranian custom had been previously exposed to wild animals and birds of prey, there were found in these burial cairns many specimens of pottery and other articles for the use of the dead. Special interest attaches to the site through the discovery that the remains of a small settlement of the living, brought to light by our trial excavation on a debris-covered hillock near by, date from the same period. A number of smaller sites of similar character were traced in the vicinity. All suggested closer occupation than this utterly arid tract, to which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Route
Ancient site
Muhammadan remains
51°
54°
57°
Kerman
Mashiz
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Rahbur
Bam
Shiraz
Persepolis
Bushire
Firuzabad
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KERMAN
Buluk
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Nurabad
Rahdar
Takkul
Daiyir
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LARISTAN
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Bandar Abbas
Gabandi
Shiu
Ziarat
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Qishm I.
Hormuz I.
Naiband
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Kumbil
Manujan
Jaz Murian
Hamun
Chah-Husaini
Damin
Katukan
Fahrej
Bampur
Mashkel
PERSIAN BALUCHISTAN
Fanuch
Lashar Ra.
Bint
Geh
Qasrqand
PERSIAN MAKRAN
Jask
Chahbar
Suntsar
Sutkagen-dor
Gwadar
Bahrein I.
PERSIAN GULF
GULF OF 'OMAN

the Bahu river and its tributaries carry water now only on rare occasions, can now support.

Before leaving this desolate ground where water could be obtained only from rare pools left behind by rain floods of the last year or two, we were able to survey the ruins of an interesting stronghold occupying the crest of a steeply eroded rocky ridge above the Giti valley and known as the "Castle of Jamshid." The abundant remains of decorated ceramic ware found in the course of trial excavations showed the stronghold to have been tenanted down to late Sasanian and early Muhammadan times. We next moved down to Chahbar, the little port of Persian Makran which, touched once every fortnight by a steamer, had to serve for the next two months as our base for mails and the scantiest of supplies.

To the west of it, at the entrance of a large shallow bay, lies the little hamlet of Tiz. Its roadstead is mentioned already by Nearchos in connection with the voyage of Alexander's fleet, and was well known to Ptolemy and early Arab geographers. An extensive debris area stretching up a cliff-bound valley, marks what in the early Muhammadan period was a much-frequented port of call for sea-borne trade between the Persian Gulf, India, and China. Trial excavations at different points confirmed the chronological evidence furnished by abundant surface finds of decorated pottery, copper coins, beads, etc. The kilns traced proved that the ornamented glazed pottery of the site was of local manufacture. Very interesting, too, was the extensive line of defences traced along the crest of the precipitous cliffs between the valley of Tiz and the sea-shore.

Like the large cemeteries of rock-cut Muhammadan graves found within the valley these far-stretched walls presuppose a considerable population at the period indicated. All the more significance attaches to the fact that no remains whatever could be found pointing to occupation of the site in pre-Muhammadan or prehistoric times. Considering the natural advantages offered by the anchorage both at Tiz and the neighbouring Chahbar this negative fact suggested that this barren coast of Makran is likely in prehistoric times to have seen as little of maritime intercourse as it did when Alexander's fleet made its adventurous voyage past the inhospitable shores of the Ikhthyophagoi, as described by Nearchos.

From Tiz we turned north, and after recrossing the southernmost of the arid hill ranges of Makran were joined by the large escort comprising eighty camel riders which General Dost Muhammad Nakshiwan, the military Governor of Persian Baluchistan, had sent for our protection within the recently pacified province. Instead of hampering our movements as I was inclined to apprehend at first, this large escort distinctly facilitated our work on ground where transport, reliable guidance, and a minimum of supplies would otherwise have been very difficult to obtain. The presence in our camp of the chief of Geh, who since the defeat and capture of Dost Muhammad Khan, for a time practically the independent ruler of Bampur, had been installed by the Persian Government as chief of Makran, greatly facilitated also the collection of useful local information. For all the help thus afforded I owe sincere gratitude to H.M. the Shah's Government and its local officers.

The small oasis of Qasrqand, reached after crossing the second Makran

range, afforded a welcome change with its date-palm groves and comparative coolness from the arid wastes passed before. But in the absence of any old remains it did not detain us long. Nor were any of great age to be traced at the somewhat larger oasis of Geh gained across the hills to the west. But here an extensive Muhammadan cemetery with ruined tombs showed that the place had enjoyed a degree of civilization far above the present one of Makran down to the late middle ages. From Geh I should have liked to reach the Bampur basin by the most direct route to the north. But trouble apprehended with the nomadic tribe holding the Lashar range caused a more devious line to be taken, first westwards to Bint and thence to the high rim of the basin at Fanuch.

I had not to regret the detour; for the evidence of prehistoric occupation which various geographical and antiquarian considerations had led me to expect in the drainageless Bampur basin first turned up within the Fanuch oasis. Several well-made cups of unmistakable chalcolithic shape and make were brought to us as having been found a year or so before, while villagers were engaged in clearing part of an underground irrigation canal or "Karez" near the northern edge of the oasis. Being taken to the spot I was able to verify the statement by finding broken pieces of other chalcolithic pottery, including painted ware, close by where they had been thrown out after the discovery. Unfortunately the considerable depth at which this accidental find had been made precluded systematic excavation within the available limits of time. But it also afforded an indication as to depth of alluvium at which prehistoric remains are likely to be hidden within the irrigated areas of similarly situated oases. Outside Fanuch we succeeded in exploring a site of burial cairns of the same type as at Damba-koh and an extensive debris area marking occupation during pre-Muhammadan times, both yielding useful finds.

Thence five marches, mainly across the desert glacis of the Lashar range, carried us down to Bampur, the traditional administrative centre of Makran and probably also of ancient Gedrosia. It is marked nowadays only by a much dilapidated fort rising on a high mound and by a collection of palm-mat huts no better than those occupied by semi-nomadic Baluch elsewhere in Makran. But around the fort on the western side rise extensive mounds, and the trial trench cut through one of the lower ones soon yielded such relics of prehistoric civilization as fragments of painted pottery among the surface debris had made me expect at the outset. Prehistoric ceramics, alabaster cups, stone implements, and small bronze objects were found in abundance, down from a few feet below the surface, all proving occupation in chalcolithic times. The painted designs, shapes, etc., of the pottery closely resembled those of the ware brought to light at prehistoric sites of British Makran. But neither here nor at any other ancient site of the Bampur basin did we find those terracotta figurines of humped bulls and the "mother goddess" which at the former afford such significant proof of the influence of ancient Indian cult.

The systematic excavation of the Bampur mounds might well claim a working season or two. No attempt could be made by us at such a task, which the approach of the hot season would alone have sufficed to stop before long. More important it seemed from several points of view to examine within the available time all the ancient sites in the basin of which I could learn from local

information. They proved to extend in a line of more than 70 miles along the course of the Bampur river, from near the point where it debouches from the hills in the north-east to where its terminal course, ordinarily dry except at the time of spates, approaches the marsh beds of Jaz-murian. This cannot be the place to record observations about all of those sites which in the course of close on four weeks' strenuous work were visited by us and, where advisable, tested by trial excavations. It must suffice briefly to note those which yielded prehistoric remains of special interest.

Thus at Damin, a cluster of hamlets above the debouchment of the river, and again at Katukan, we found remains of funeral deposits of chalcolithic times with plenty of fine painted pottery in a place which a kind of "continuity of local worship" had caused to be used thousands of years later for cairn burials about the beginning of our era and subsequently again as a Muhammadan graveyard. On our way up the river the opportunity offered of examining the wide area where the river, spreading itself in numerous channels, ordinarily all dry, makes its sharp bend from north to west near Fahreh, now renamed Iran-shahr. There is good reason to believe that the stretch of continuous cultivation, dependent as it must always have been on irrigation from the river, had its head here already in prehistoric times. But owing, no doubt, to the deposits of alluvium, bound to be heavy just on this quasi-deltaic ground, indications of a chalcolithic settlement could be traced only at one point.

Fahreh itself has nothing of antiquity to show. But owing to the large fort built here in the last century for a Persian garrison to control Makran the place has attracted the attention of travellers. On account of the apparent similarity of its name it has been identified with *Πούρα*, the capital of Gedrosia, mentioned by Arrian as the place where Alexander rested his army after its disastrous march through Makran. There is nothing definite to support this location, which might just as well be claimed for Bampur, in view of its traditional importance and its central position within the cultivable belt of the basin. But that Alexander's route, coming from the Kej valley in British Makran, led him through the Bampur basin appears certain, as I hope to show in another place.

It was on the left bank of the river below Fahreh, on ground now wholly a scrubby waste, that we made a particularly interesting discovery of prehistoric remains. It was the burial ground of a chalcolithic settlement which chance finds of herdsmen had revealed there. Hidden only a few feet below the surface and yet fortunately undisturbed there could be recovered here quite a series of elaborate funerary deposits. Each comprised dozens of well-painted vessels meant to hold food for the dead, besides a variety of small objects of stone and copper which had served them in daily use. The decorative motifs of the painted ware show such close resemblance to those found on vessels from the necropolis of Susa far away in the west and from the burial deposits of Shahi-tump in the east that the simultaneous extension of the same chalcolithic civilization over the whole intervening region about the close of the fourth millennium B.C. may be accepted as definitely proved. Here, too, exposure of the bodies appears to have been the usual practice in disposing of the dead.

Beyond the lowest point to which the Bampur river now ordinarily carries water we found the position of a considerable prehistoric settlement marked by a large mound rising amidst dunes near the grazing ground of Chah Husaini. The quantity of worked flints which mingle on the surface of the mound and around it with an abundance of painted potsherds was surprising. A variety of indications, supported also by finds in the course of a rapid trial excavation, suggested that the occupation of this lowest of the prehistoric sites traced near the Bampur river dated back to an earlier phase of chalcolithic civilization than the rest. Among these indications it must suffice here to mention the total absence of stylized animal figures on the painted pottery by the side of the striking variety and fine execution of geometric designs; also the abundance of hand-made ware, the painted pottery being here as elsewhere always wheel-made.

A journey of some 160 miles thence carried us over desert ground north of the dying Bampur river and the Jaz-murian marshes to where the latter are approached by the terminal course of the Halil Rud descending from the north-west. The route followed across this great waste of gravel, drift sand, and bare clay was determined by the position of the rare wells to be found on this ground. Mounds of small size were to be seen near most of these points, but invariably proved to date from occupation in historical times. This observation, puzzling and rather disappointing at first sight, revealed its interesting significance when I found that former cultivation near the mounds had been wholly dependent on irrigation from old "Karezes" or underground canals, long abandoned but still traceable. The torrent beds which descend into the depression from the low hill chains to the north evidently could in prehistoric times have sufficed as little as now to maintain agriculture at these localities. Their permanent occupation became therefore possible only by the construction of Karezes tapping the subterranean flow of water.

Now from an important passage of Polybios (X. xxviii) we know that underground canals (*ὑπόνομοι*) for irrigation purposes were in existence over wide portions of Persian territory already in Arsacidian times; also that tradition ascribed great antiquity to their construction, connecting it with the very beginning of Persian domination in the Near East. But no direct archaeological evidence has, as far as I know, been advanced as yet for the determination of a *terminus post quem* as regards the introduction of this characteristic feature into the agriculture of Iran. The absence of any traces of prehistoric occupation on the ground which divides the terminal course of the Bampur river from that of the Halil Rud, while it is well attested on both of these, proves that Karez irrigation in Iran dates from post-chalcolithic times. The same negative fact allows us further to conclude that this ground must have already in chalcolithic times been as incapable of cultivation from surface drainage as it is now. This conclusion deserves to be kept in view with regard to the complex question of "desiccation" as far as it affects Iran.

As soon as we could strike south towards the terminal course of the Halil Rud we came upon evidence of prehistoric settlements. It first presented itself in the shape of extensive debris areas with chalcolithic pottery, etc., near the grazing ground of Takkul, and then in the form of considerable mounds found farther up the river within the district known as Rudbar. The Halil

Rud is fed by streams from high ranges to the south of Kerman which culminate in peaks rising to over 14,000 feet, and carry snow in parts for several months in the year. The volume of water carried by the Halil Rud is hence more considerable than that of the Bampur river. This fact is reflected in the greater extent of permanent cultivation even now when the riverine tracts have barely had time to recover from the vicissitudes to which they have been exposed for centuries through Baluch raids and Afghan invasions. The numerous and large mounds examined higher up the river within the northern portion of Rudbar proved all to have been occupied down to mediaeval times, the remains of early settlements lying probably hidden under alluvium and masses of later debris.

The same proved to be the case also after we had entered the wide basin of Jiruft through which the river passes before reaching the plains of Rudbar. Early Arab geographers have much to tell of the fertility of this tract. Through it led the important caravan route connecting Kerman and the central districts of Persia with Hormuz near the present Minab, the great mediaeval port at the mouth of the Persian Gulf. The comparative abundance of water which accounted for this fertility would still permit of cultivation in Jiruft to be greatly extended. But the neglect of irrigation canals and embankments during centuries of ravages and decay has allowed a considerable portion of the valley trough to become waterlogged and liable to destructive inundations. It is due to the same cause that I found several large mounds situated in this belt so deeply permeated with salt efflorescence (*shor*) that close examination of the pottery and other debris embedded in their layers was difficult. All the same there was evidence of the rise of these mounds having started in prehistoric times.

At the head of the Jiruft basin there lies on an old river terrace a large ruined site, known as the "Town of Daqianus." It has long ago been recognized that it marks the chief place of Jiruft as described by Muqadassi, and other Arab geographers. Marco Polo's account of his journey from Kerman to Hormuz leaves no doubt about its identity with his "city called *Camadi* which formerly was a great and noble place, but now is of little consequence; for the Tartars in their incursions have several times ravaged it." The great abundance of fine pottery fragments, mostly glazed or relief-decorated, which could be picked up all over the site, bore testimony to the prosperity which the city had enjoyed. The numerous coins found at the site point to the city having flourished greatly during the period of the early Abbasid Caliphs (*circ.* A.D. 750–860). But some seals engraved with late Hellenistic designs I acquired there suggest that the site was occupied earlier. A brief trial excavation brought to light some good specimens of ornamented ceramic ware of Muhammadan times and confirmed Muqadassi's statement about the houses of Jiruft having been built with sun-dried bricks on stone foundations.

Ever since our start from the side of Bampur the heat had steadily increased, and it scarcely needed the experience of the torrid days spent over the survey of the "City of Camadi" to convince me that now by the middle of April the season for archaeological work on this low ground had come to an end. A variety of considerations had obliged me to decide on a return to England until the planned continuation of my task in the direction of the Persian Gulf could

be undertaken by the autumn. Kerman with its British Consulate offered itself as the most suitable place for depositing our *impedimenta* and arranging for such topographical work as Surveyor Muhammad Ayub Khan would be able to continue in the mountainous region north and south of Kerman during the interval. Ever since Persian territory was entered he had carried a careful plane-table survey along our route, based wherever possible on previously triangulated points.

Our journey to Kerman led first to Bam, crossing the Jabal Bariz range where for a few marches we could refresh ourselves in cool air. The total distance of the journey done on camel-back from Gwadar to Bam was a little over 1200 miles. At Bam we took leave of our escort with feelings of sincere gratitude for all the efficient help its genial commandant had rendered. Thence two motor lorries carried us, not without a succession of breakdowns, to Kerman. There manifold practical arrangements, such as the safe packing of antiquities for transmission to the British Museum, could be promptly attended to with the friendly assistance of the Consular Staff. Then six days' travel in a motor lorry carrying our cases of antiques brought us to Bushire. On the way a short but very instructive halt was enjoyed at Persepolis with Professor Herzfeld under whose expert direction the ruins of that grand site are now being systematically explored and cleared for the first time. Finally, on May 11, Dr. Fábri and myself embarked for Basra whence the railway allowed us to reach England by the most direct route *via* Baghdad and Constantinople.

By the close of October I rejoined my camp at Kerman, after a few days' stay at Tehran had enabled me through the kind help of Sir Richard Hoare, H.B.M.'s Minister, personally to explain the objects of my tour, including the topographical work connected with it, to the Persian Ministers of Foreign Affairs, Education (including Antiquities), and War, as well as to the Chief of the General Staff. Dr. Fábri, after arranging our collection of archaeological finds at the British Museum, had returned to his Leiden post. But Surveyor Muhammad Ayub Khan, who had during the summer carried out much useful survey work in the hills to the north-west of Kerman as well as in the high valleys to the south, continued to give valuable aid throughout my resumed explorations. These were intended to take me first through the south-eastern parts of the Kerman province to the entrance of the Persian Gulf, and subsequently along the shore of the latter into the southernmost portion of Fars, the ancient Persis.

In accordance with my instructions Muhammad Ayub Khan had in the course of the summer's surveys kept a careful look-out for any old sites and collected in each case specimens of such pottery and similar relics as could be picked up on their surface. At most of the numerous sites noted by him such specimens indicated occupation down to mediaeval Muhammadan times. But at a number of places he had traced cairns marking pre-Muhammadan burial deposits, and at two of these I was able by an excursion from Kerman to verify the correctness of the diagnosis by excavation. On November 6 we started south for the plateau of Bardsir below the Lalehzar range, where specimens of painted potsherds brought by the Surveyor indicated a pre-

historic site at the mound of Tal-i-Iblis. On the way to this I examined at the village of Mashiz a large debris area marking a settlement evidently occupied down to mediaeval times. But there was nothing to support the assumption put forward on the strength of the term *Bardsir* ("the cold tract"), as used by early Muhammadan writers in a more general way, that the ancient capital of the province stood here and not at the present Kerman.

When we were about to prepare a sketch plan of the site, I learned to my surprise from the officer in charge of the small escort provided by the Military Commandant of Kerman that no survey work was to be allowed. This objection was manifestly contrary to the views expressed by the Tehran authorities and to the comprehending attitude previously shown towards our work. On reference to Tehran the alleged instructions were accordingly disavowed, but the difficulty was not removed before our arrival at Bandar Abbas a month later.

It was equally disappointing on reaching Tal-i-Iblis, the "Devil's Mound," a short march to the east of Mashiz, to find any trial excavation beyond the merest scraping of the surface prevented by the same officer. I had all the more reason to regret this interference as abundant finds of painted pottery, worked stones, fragments of alabaster vessels, etc., both on the high mound and on the extensive debris-marked area around it conclusively proved the site to have been occupied by a considerable settlement in early chalcolithic times. This made the physical change observed on this ground particularly interesting. All round there stretches now an utterly waterless sandy waste. At the hamlet of Haidarabad, the nearest inhabited place 4 miles away to the north, cultivation was maintained until recent times through a couple of Karezes, which have now dried up. But close to the east of the mound there passes a well-marked river-bed. As the Surveyor's previous mapping of this area showed, it must have branched off from the present course of the river which descends from the high Chahar-gumbaz range and carries water to the land cultivated about Mashiz. Only a close survey of the ground could show whether the abandonment of the Tal-i-Iblis area to the desert was caused by a shift of the river course or a diminution of the available drainage since prehistoric times.

The week's steady marching which followed took us across two high spurs of the great Lalehzar peak by passes over 10,000 feet in height and already under their first snow, to the headwaters of the Halil Rud. There were no archaeological observations to be made either at the pleasant orchard-girt village of Rabur or on the plateau of Isfandaqeh, the only permanently occupied places which our route passed. But it offered welcome opportunities for gaining some acquaintance with that elevated zone of south-eastern Persia, which since the earliest times must have provided summer grazing grounds for nomadic tribes like the present Afshar. The nomad camps we met were on their move down to winter grazing about Jiruft.

Leaving Isfandaqeh by a route not previously surveyed across the Chorchur pass we descended into the broad valley of Buluk which adjoins the lower portion of Jiruft from the west. Here I came at once upon evidence of prehistoric occupation near the hamlets of Daruyi and Nurabad in the shape of considerable mounds showing plentiful painted pottery of the familiar chalcolithic type as well as worked stones. It appeared to me very improbable

that cultivation near these mounds could have been practised at that early period unless the flood bed passing in their vicinity carried water far more regularly than it does now. Such cultivation as now exists depends on Karez irrigation.

From here we turned to the south-west, and crossing the almost imperceptible watershed towards the mouth of the Persian Gulf made our way by three marches to the Gulashgird valley. Most of the ground in the wide trough crossed is now a scrub-covered waste, with patches of ground here and there tilled only when exceptional rain floods descend from the higher hills to the north. But that this tract must have held more of a settled population within historical times is proved by an extensive series of burial cairns examined on the way to Darrashor and by several debris areas with pottery dating from early Muhammadan times. The largest of them lies to the north of the date groves along the Gulashgird stream and evidently marks the site of a small town. This is likely to have shared the same fate during the Mongol incursions, as the "City of Jiruft" by the time when Marco Polo may be assumed to have passed here, on his way from "*Camadi*" to Hormuz, near the present Minab. As we descended along the Gulashgird stream to where it enters the defile bearing the significant name of Rudkhanh-i-duzdi, "the river bed of robbery," I thought of Nearchos, who on his way from Hormuz to Alexander's camp also probably passed somewhere near here.

For the remaining three marches to Minab I chose the route leading across the barren plateau of Rahdar and a troublesome pass into the wide main valley of Rudan. I had not to regret the choice; for in this fairly well-watered tract I found remains of chalcolithic settlements at two mounds which under different conditions of travel would certainly have invited trial excavation. Then a long march on November 29 through the narrow gorges of the united stream from Rudan and Manujan brought us down to the town and oasis of Minab. With its date groves, wheat fields, and plantations of subtropical fruit trees, all irrigated from the river of Rudan and stretching unbroken for about 10 miles from north to south, Minab certainly owns by far the largest piece of productive ground along the whole of the Persian sea-coast.

For those who have seen something of the forbidding shores of Makran and the scarcely less barren ones of the Persian Gulf it is easy to realize the feelings of the men of Alexander's fleet when at last they had passed through the entrance of the Gulf and could draw their boats on shore by the mouth of the river of Harmozeia, *i.e.* Hormuz. The early Arab geographers all attest the importance of Hormuz as the chief port for the sea trade from India and the Far East to Kerman, Seistan, and Khorasan. This importance is fully accounted for by the local resources of Minab and the safe anchorage which the tidal creeks at the mouth of its river provide for ships of shallow draught. Nor was the shift very great when the insecurity produced by Mongol ravages forced trade to transfer itself to the island of Hormuz, situated only 20 miles to the west of the river mouth and still known by the ancient local name brought across from the harbour of Minab.[1]

[1] I cannot refrain from referring here to the admirably documented account of the history of Hormuz, both old and new, contained in Sir Arnold Wilson's 'The Persian Gulf,' pp. 101–152.

At the town of Minab no remains of any antiquity could be traced, the fort picturesquely perched on a rocky spur above the modest Bazar being manifestly of late construction. But from the outlying little hamlet of Kumbil some 10 miles to the south I was able to visit extensive debris-strewn patches of ground with remains unmistakably proving occupation down to mediaeval times. Owing to manifest changes of the river channels no ships could approach these places now within miles. As they are at the same time liable to be flooded at exceptionally high tides, it is clear that the level of the shore has been lowered here. The plentiful pieces of Chinese porcelain and stoneware which could readily be picked up here among Muhammadan pottery, as well as the fragments we found of Chinese copper coins, offered eloquent evidence of the distant trade intercourse which Hormuz had once seen in mediaeval times.

Equally significant it was that the debris of old kilns and dwellings to be seen on a long stretched terrace of sandstone some 4 miles farther inland showed the same decorated pottery of early Muhammadan times as those sites by the sea-shore. It was the same at a mound visited some 7 miles south-west of Minab near a wide marsh bed which seems to mark a former river channel. Nowhere about Minab or, I may state at once, anywhere else along the 600 odd miles we covered along or close to the Persian Gulf coast, did I come upon remains which could be ascribed to prehistoric times. If, on the other hand, we take into account how frequent were at most of the small ports we passed relics indicative of maritime trade with China during Muhammadan times, it will be difficult to deny some weight to this negative evidence against the theory of maritime intercourse in prehistoric times between ancient Mesopotamia and India, which has often been rather too readily assumed in recent discussions on the "Indus civilization."

A journey of four days along the foot of low and utterly barren hills overlooking a wide alluvial plain, almost wholly desert, brought us by December 6 to Bandar 'Abbas. The town which with its open roadstead has succeeded Hormuz, both the old and the new, had nothing to offer inducing a long stay. But notwithstanding the friendly attention of the local authorities, which orders issued from Bushire by the Governor-General of the Coastal Province had assured, serious delay arose about securing transport for the onward journey along the coast. For two years the coast, arid at all times and exceedingly poor in its agricultural resources, had seen no rain. Conditions of real famine prevailed all along it, reducing still more the limited number of camels and donkeys to be found there. Arrangements for a fresh escort also added to the delay. Fortunately however they removed all obstructive interference with our work, the officer in charge of the small escort, Naib Mustafa Khan Rashidi, proving in every way helpful in spite of the trying conditions of travel.

From the village of Naiband where Mr. Richardson, the retiring British Consul, had kindly secured us quarters less exposed to malaria infection than the rest of Bandar 'Abbas, I was able to pay a day's visit to the island of Hormuz. There the strong castle which for over a century was the base of Portugal's supremacy in the Persian Gulf still remains in its ruined state an imposing monument of past glory. Even at this the least oppressive season of the year I could not think without dismay of the sufferings which life amidst its walls must have entailed for those who defended the stronghold before it fell in

1622 to the combined attack of Persian land forces and English ships. Looking down from the height of the massive keep of the castle on the small village of fishermen and the dumps of red oxide, mined among the low hills of the island, which now forms its only trade, it was difficult to realize how this barren rock could have been for centuries the great emporium of the East proverbial for its wealth. An area about half a mile in length and less than that in width, covered with crumbling walls and low mounds of debris, is all that remains of the rich city which at one time is believed to have held a population of 40,000 souls. Half a dozen shallow wells and a small number of vaulted cisterns to be seen among the mounds are barely sufficient to supply water for the present village. This explains the statements about the dependence of Hormuz at the times of its greatness upon water brought from the coast as well as the labour bestowed by the Portuguese upon the construction of the magnificent cisterns still to be seen within the castle. It was of interest to note among the debris of the site the abundance of Chinese pottery and of decorated local ceramic ware closely resembling that found at the kilns of Kumbil.

On December 15 we were at last able to start from Bandar 'Abbas for the long journey along the coast. The rain so long vainly hoped for set in that very day. Renewed at intervals it greatly delayed our progress by making the soft alluvial soil at the wide mouths of the valleys descending from the Laristan hills very troublesome to cross for the camels. Fortunately the rain bursts did not last sufficiently long to render the rivers draining those valleys unfordable at the time. No old remains were to be found along the narrow coastal belt; nor could I learn of any on the long stretched island of Qishm within sight across the narrow waters of the Clarence Strait which the route was skirting. All along we found that a large portion of the inhabitants had been driven away by the famine to Bahrain and the Arabian coast. What was to be seen of the rest strongly impressed me both here and farther on with the great preponderance of Arab stock in the coastal population.

By Christmas Eve we reached Lingeh town after inspecting the scanty remains left at Kung of the fortified trading post maintained here by the Portuguese long after the fall of Hormuz. Lingeh, which has suffered much decay in recent years, detained us for four days, partly owing to severe malaria brought from Bandar 'Abbas by my party and escort, and partly on account of the difficulty of securing transport. The delay however could be utilized for a survey of a remarkable ruined fastness known as *Leshtan*. About 5 miles to the north of the town there rises in a desolate landscape of eroded sandstone terraces a large Mesa to a height of about 200 feet. Its southern face falls off with vertical cliffs overhung in places by a crust of cretaceous sandstone. The rest almost equally steep is crowned with high walls of rough stones set in mortar. Access to the stronghold is gained from a narrow ravine on the north by a difficult path leading to the single gate. The whole of the rocky ground within is honeycombed with dwellings and cisterns cut into the sandstone or else covered with crumbling walls of domed structures. A very striking feature is the large number of cisterns, some seventy in all, all originally vaulted, either oval or circular, the greatest measuring no less than 118 feet in length. Protracted occupation of the stronghold is proved by a number of cemeteries, with closely packed graves cut into the rock, and by the plentiful

abundance of pottery debris. The types of decorated ceramic ware make it probable that occupation started early in the Muhammadan period and lasted down to late mediaeval times.

Beyond Lingeh our progress close to the coast was so much hampered by constant breakdowns and desertions among our transport, now mainly donkeys, that after reaching the small port of Charak with difficulty on the night of the New Year I decided to make our way to Bandar Muqam through the valley of Gulshan which runs parallel to the coast and was believed to be less affected by famine conditions. The vicinity of the higher coastal range allowed there of useful survey work, but opportunities for antiquarian observation did not offer there either. At Bandar Muqam, a small port serving the western valleys of Laristan, there was again evidence of mediaeval maritime intercourse with India and the Far East in the shape of Chinese porcelain among the debris of low mounds adjacent to the Arab Shaikh's fort. Fortunately this petty chief still retaining some local authority showed his good will by providing such transport as enabled us to follow the route to Shiu along the rocky coast. Owing to its difficulty and insecurity it appears never to have been surveyed. Even here, in a small cliff-bound bay now frequented only by smuggling hillmen, I found remains of a modest settlement of mediaeval times which had its share in the maritime traffic then prevailing along the Persian Gulf and beyond.

Some 3 miles beyond Shiu we came near the small fishermen's hamlet of Ziarat upon two larger debris areas which by their ceramic remains clearly suggested occupation in early Muhammadan times or, perhaps, even before within the historical period. But nowhere along the coast were any indications of prehistoric occupation to be traced. Ziarat with its good anchorage serves as a port for the head of the Gabandi valley which behind a low sandstone range runs parallel to the coast. Into this less arid tract we now turned by a previously unsurveyed route, and in the course of four marches reached the coast again at the small harbour of 'Asalu beyond the great bay of Naband. Apart from the usual difficulties about transport no awkward experience was incurred notwithstanding the bad reputation which the people of Gabandi have acquired from their former raiding propensities. But a report received here about tribal unrest in the valleys beyond to the north-west conveyed a first warning of possible obstacles ahead.

A long march of January 11 brought us along the coast to Tahiri and prepared us for the important old site ahead. For close on 8 miles the terraces between the foot of the rugged coastal range and the steep slope of what looked like an earlier shore-line were found again and again to bear traces of former habitations in the shape of decayed rubble-built walls and plentiful pottery of a peculiar kind, plain but remarkably well made. It was not long before we came upon a series of old kilns close by the sea-shore where this ware, often showing a characteristic ribbing, had been made. It must have been the chief local product which this barren strip of coast could ever have supplied to the great mediaeval emporium of *Siraf*, the ruined site we were bound for.

Immediately to the west of the wretched fishing village of Tahiri there stretch for a distance of nearly a mile and a half the remains of the town which from the accounts of Arab geographers has long been known as the chief centre in the early Muhammadan period for the maritime trade of Persia and

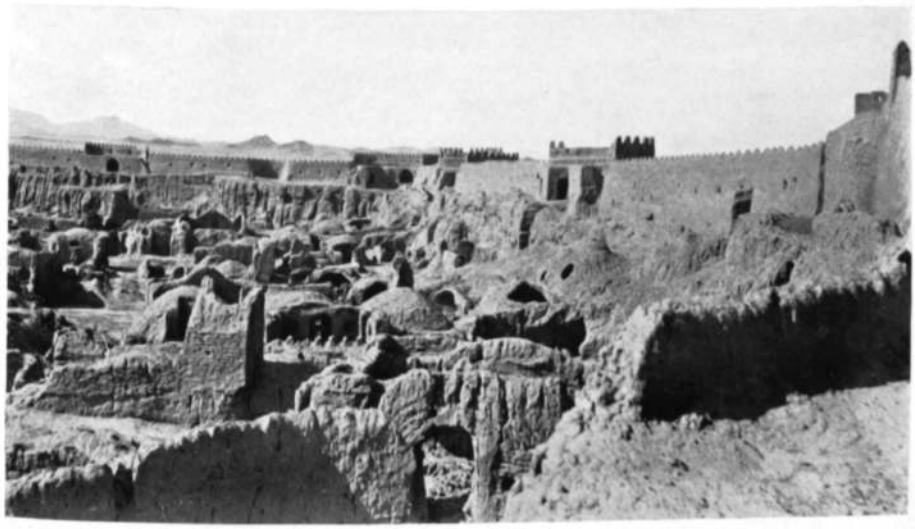
all the adjacent regions with India and the Far East. The detailed descriptions of the great wealth of Siraf and the opulence displayed in the mansions of its merchants made the picture of utter destruction presented by the site and the strangeness of its position all the more impressive. From the water's edge, still lined in places by the remains of a massive quay wall, there rise terraces overlaid by the shapeless debris of stone-built houses right up to the steep crest of a limestone ridge at a height of about 300 feet. It would have been difficult for me to realize how this town within the narrow available space could have held so large a population as the accounts indicate, had memory not recalled the picture presented by the tiered high houses of more than one old port on the Genoese Riviera. It was easier to recognize the correctness of the Arab geographers' references to the barrenness of the town's surroundings and the excessive heat of its climate. The prevailing difficulty about water was clearly marked by the many vaulted cisterns and deep rock-cut wells traceable even on the very crest of the ridge. This bears the only two structures still in fair preservation and evidently of later date, one a mosque and the other a domed tomb.

But even more impressive than the picture of utter decay to be seen at what was once a thriving town of the living was the view gained from the hill crest of the great necropolis in the valley behind it, known as *Shilau*. All over the bare slopes rising northward above the bottom of the valley there were to be seen by the hundreds rock-cut graves and grottoes. Wherever the gentler slope afforded convenient room the graves had been grouped in closely serried rows into regular cemeteries. Broad stairways cut into the rock lead up to and through these systematically arranged graveyards, while shallow grottoes could be seen honeycombing on all sides the steeper rock faces. The orthodox north-to-south direction observed in the vast majority of the graves clearly showed that they were intended for the last rest of the Faithful. But in one of the graveyards the direction lay regularly from east to west in agreement with the custom still observed by the small Jewish communities found along the coast. Among the variety of curious observations made during the careful survey of the site I may only mention the aqueducts found at a few points behind the town. They were clearly intended to carry water to mills and may have been fed from Karezes no longer traceable now.

Siraf, which is mentioned by the middle of the ninth century as the chief emporium of the Gulf in connection with the China trade, had entered its period of decay already towards the close of the tenth century A.D. when a great earthquake accelerated its incipient ruin. At the beginning of the thirteenth century the geographer Yaqut found the place almost completely deserted. The chronological limits thus indicated invest the plentiful relics of fine decorated pottery which could be collected at Siraf with distinct archaeological interest. But neither these relics nor the work entailed by the survey of the site might have kept me for eight days at Tahiri had not the start I was anxious to make now from the coast into the hills of Laristan been delayed by the usual difficulties about transport which rumours of "tribal unrest" now increased. So it was a relief when the help requested from the chief of the Gilehdar tract behind the coastal range at last materialized in the shape of two dozen of donkeys and a small posse of his armed followers to provide protection.

Burial cairns of Damba-Koh: ruined site in distance below on right

Interior of ruined stronghold of Leshtan



Fort of Minab

Rock-cut graveyards of old Siraf

Funerary deposits at Khurab burial site

The journey to the chief's seat at Nauba towards the head of the Gilehdar valley proved trying in parts, but also unexpectedly interesting. The route, never previously surveyed, led from the hamlet of Puzeh steeply up the rugged coastal range rising wall-like to heights close on 5000 feet. Very soon after the ascent began we came again and again upon remains of a well-made road built with large cut stones. Over the worst bits of bare rock slope it had been carried in carefully graded serpentines; but over most of the ground it had completely disappeared. In several places we found cisterns and well-built vaulted quarters for wayfarers. Whereas at one point the present track, scarcely fit for laden donkeys, clambers up along what may well be called a rock ladder for some 300 feet, it was still possible elsewhere to follow the carefully walled-up old road clinging to almost vertical limestone cliffs. At the point where rain-water in a natural rock reservoir allowed us to halt for the night, a bit of level ground had been provided by damming up a ravine with a solidly built barrage and making a deep cutting through the live rock on one side of it to allow of drainage in case of rain floods. There could be no doubt that all this excellent engineering, nowhere met before on our travels in these regions, dated back to the period when a main route from Siraf towards Shiraz and other great centres of Persian trade and industry passed here. It was then certainly fit for laden camels.

At Nauba, at an elevation of some 1500 feet, we found cool air and the sight of green meadows studded with narcissus in bloom to refresh us. The young chief seemed very willing but his authority much impaired by the approach of "tribal unrest" from the north where a minor Qashqai rising was reported being dealt with by troops. This however did not prevent us from surveying a number of ruined sites in the neighbourhood. Several of them showed remains in the shape of ruined mosques, fine sculptured tombstones, decorated ceramic ware, etc., dating from the period when Siraf had flourished and when the traffic from its port must have brought prosperity also to the Gilehdar valley.

But of much greater interest was the discovery of a low mound near the village of Haraj containing the remains of an early prehistoric, possibly neolithic, settlement. The cutting of trial trenches brought to light plenty of stone implements and a quantity of painted pottery with a great variety of monochrome geometrical patterns. Some of the ware found was of very fine fabric and showed in its decoration distinct affinity to the very early painted pottery discovered by Professor Herzfeld at an important site close to Persepolis and considered by him neolithic. Burial remains were also unearthed here. Several smaller mounds in the vicinity seem to hide similar prehistoric settlements. An interesting fortification of considerable extent, probably dating from historical times but pre-Muhammadan, was traced above Haraj on a high rocky spur flanked on either side by precipitous ravines. The position chosen for what evidently was meant to provide a temporary place of safety, curiously recalled the mountain stronghold of Zamr-i-Atash-parast surveyed by me far away on the Russian side of the uppermost Oxus.

For various reasons I was now anxious to move eastwards to Lar where I hoped that a Persian garrison would permit me to secure a fresh escort and to let the worn-out party from Bandar 'Abbas return. An offer of transport and

protection from the Khan of Warawi enabled us to move down the valley for two marches. A two-days' halt at his village allowed me to visit more ruins in the vicinity, including sepulchral structures for subaerial burial of a type nowhere met with before. But the refusal of the headmen farther down the valley to provide transport or guarantee security barred the way to Ishqanan and thence to Lar. So in the end I felt obliged to give way to the representations of our escort officer and turn south to the coast. The track we had to take across the coastal range was even more troublesome than the one followed from Tahiri, but also showed evidence of old engineering.

It had become clear that the disturbed conditions farther north would not permit of a move into the hill tracts of Laristan or Firuzabad. I had hence to resign myself to seeking a fresh base at Bushire. After regaining 'Asalu in safety by February 5 the difficulties about transport proved even greater than before. So I agreed to an attempt to shorten the journey by embarking in an open country boat for Daiyir, a little port some 40 miles beyond Tahiri, where we might hope to find camels. The attempt lamentably failed, for after a fair wind had brought us almost within sight of Daiyir the little craft, leaking badly all the time, was driven back during the night by a violent north gale. In the end we felt glad when the skill of the Arab sailors allowed us to cast anchor in comparative safety some distance below Tahiri. The misery endured by my people and escort on this short cruise provided in a way a useful antiquarian experience; for it let me realize better than I might have done otherwise how Nearchos' men may have felt in their crowded small ships when making their way along a coast so exposed to strong and rapidly changing winds as that of the Persian Gulf.

Of the journey which broken by enforced halts brought us to Bushire in the course of a fortnight, the briefest record will suffice. What scanty remains of former occupation were met with along the narrow coastal belt close on 200 miles in length all belonged to Muhammadan times. At Bushire I was welcomed with the kindest hospitality by Major the Hon. T. C. W. Fowle, the British Political Resident in the Persian Gulf, and Mrs. Fowle. Ever since leaving Bandar 'Abbas it had been impossible to arrange postal communications. So it was only on nearing Bushire that I received information of telegraphic instructions having issued already at the beginning of January from Tehran postponing my journey to the next (Persian) year. This order was obviously prompted by the tribal unrest in the area which at the very time I was about to approach from the side of Tahiri.

The proposal repeatedly urged from Bushire to be allowed to change my tour to other ground failed for the time being to produce a modification of the order. So after a prolonged stay under the hospitable roof of the Residency I thought it best to utilize the remainder of the cool season for a short tour in Swat, supplementary to my previous explorations in that fascinating region on the Indian North-West frontier, and subsequently, while at work in Kashmir, to await a favourable decision which would allow me to resume my task in the autumn. The hoped-for approval of the Persian Government for my new programme having now been granted, I propose to return before long to the valleys of the ancient Persis.

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